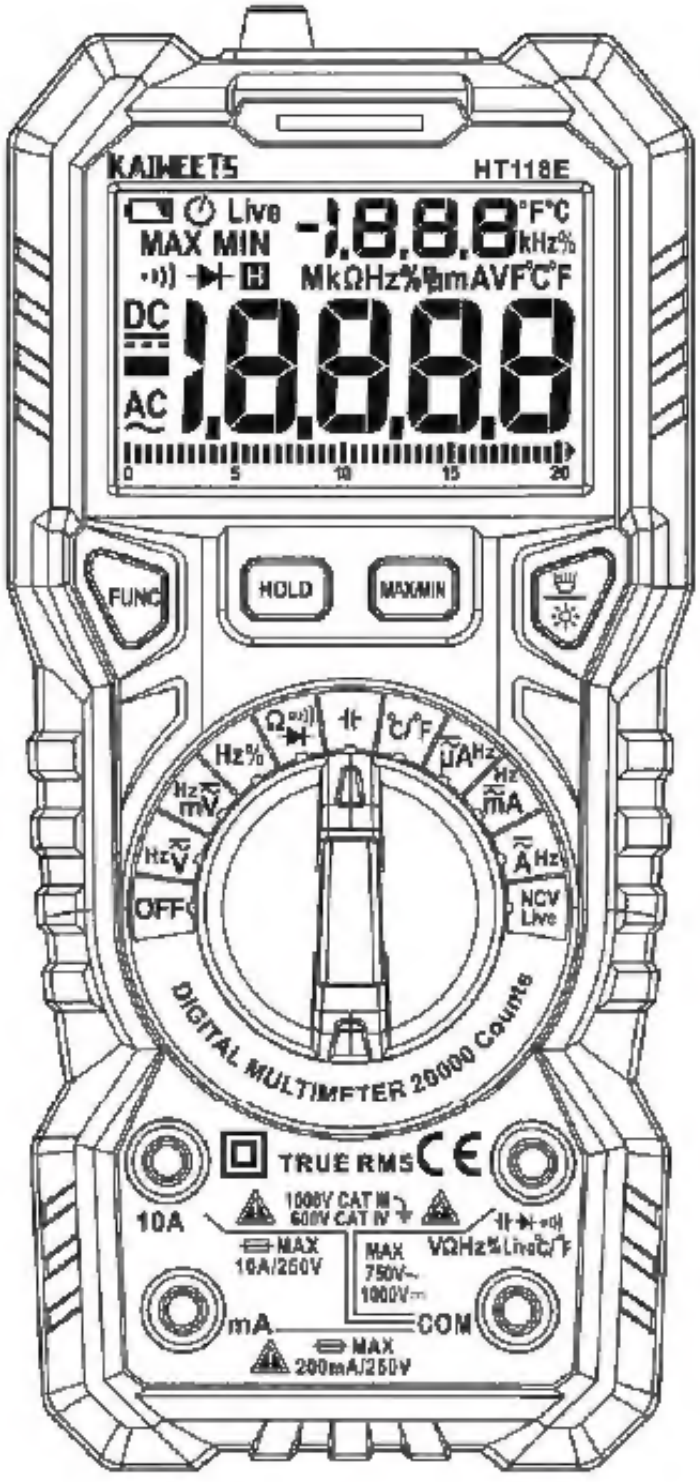


KAIWEETS

User Manual

Digital Multimeter

True-RMS

Model: HT118E

CE UKCA RoHS MADE IN CHINA

Contact us: support@Kaiweets.com

Languages

English.....1

Deutsch.....17

Español.....35

Français.....52

Italiano.....69

3 years warranty.....85

Safety Instructions

The instrument is designed according to the requirements of the international electrical safety standard IEC61010-1 for the safety requirements of the electronic testing instruments. The design and manufacture of instruments strictly comply with the requirements of IEC61010-1 CAT.IV 600V CAT.III 1000V over-voltage safety standards and pollution level 2.

⚠ **Warning**

In order to avoid possible electric shock or personal injury and other safety accidents, please abide by the following specifications:

- Read this manual before using the instrument, and pay special attention to safety warning information.
- Check whether the instrument case is damaged.
- Comply with local and national safety code.

Safety Operating Procedures

- Remove probe before opening the outer cabinet or battery cover.
- Put your fingers behind the finger protector of the probe.
- Connect the neutral line or the ground line first, then connect the live wire.
- Disconnect the live wire first, then disconnect the neutral line and ground line.
- Replace the battery when it shows low battery indicator.

Cautions

- Don't use the instrument around explosive gas, steam or in wet environment.
- The instrument is used with specified category, voltage or current rating.

- Be careful if the measurement exceeds 30V AC true RMS, 42V AC peak or 60V DC.
- By measuring the known voltage to check whether the meter work is normal, if it is not normal or damaged, do not use it again.

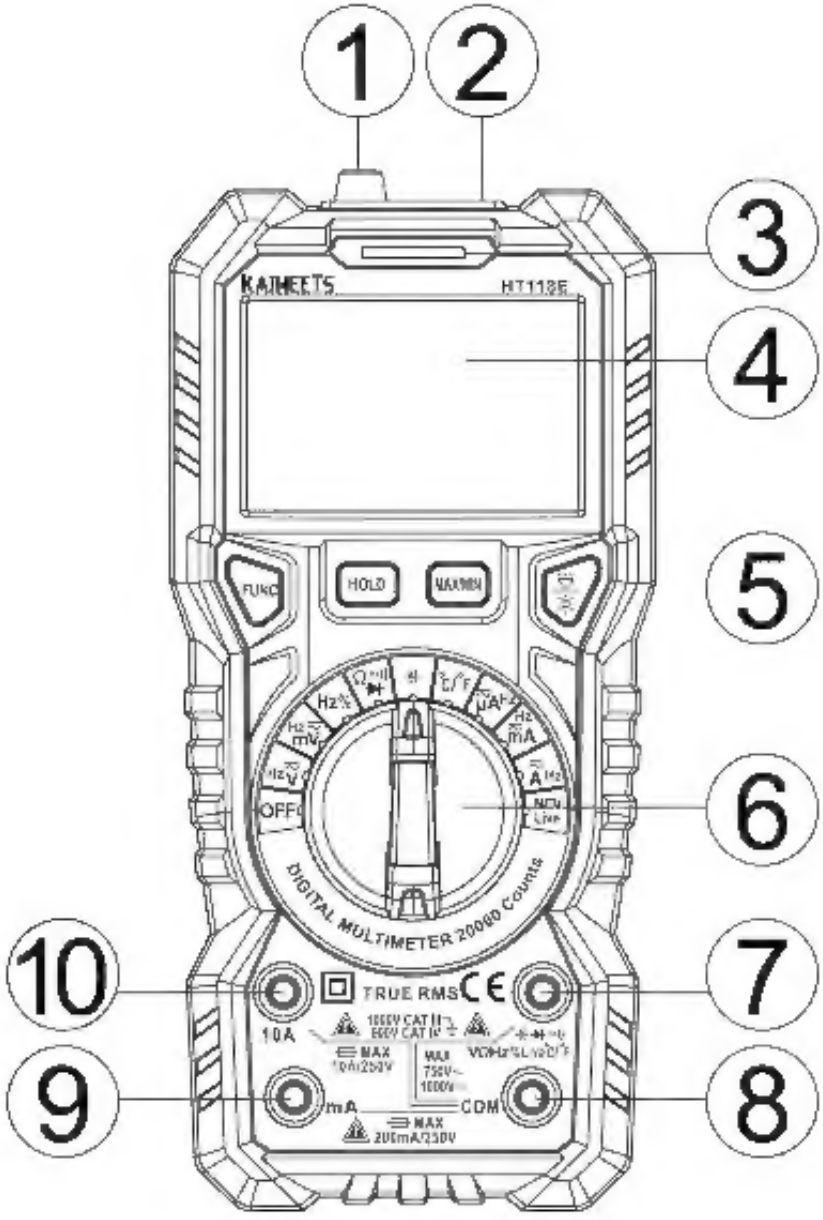
Product Description

Safety Symbol Meaning

ϟ	Unsafe Voltage	⚠	Warning
~	AC (Alternating Current)	⎓	DC (Direct Current)
≂	AC or DC	⏚	Earth ground
⊟	Fuse	▭	Low Battery
⧈	Double insulated	CE	Complies with EU directives.
🗑	Do not dispose of this product as unsorted municipal waste.		

CAT II	Suitable for testing circuits directly connected to power points (sockets and similarities) of low voltage power installations.
CAT III	Suitable for measuring circuits connected to the distribution part of low voltage power supply devices in buildings.
CAT IV	Suitable for measuring circuits connected to the power supply of low voltage power installations in buildings.

Multimeter Features



① NCV probe

② Flashlight

③ Red / Green Light

④ LCD display (bicolored)

⑤ Function Keys

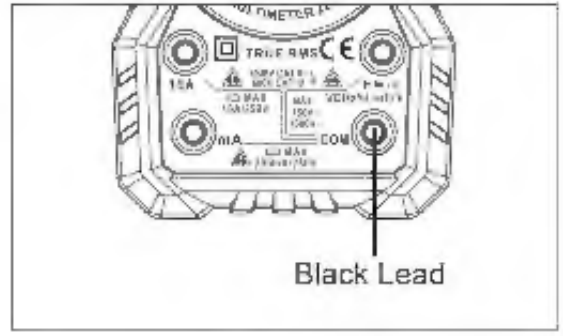
⑥ Rotary Switch

⑦ V-Terminal VΩHz%Live

⑧ COM Terminal

⑨ mA, uA Terminal

⑩ 10A Terminal



Function Keys

	Press the FUNC button to select the appropriate measurement function.
	Press the "HOLD" key, hold the data for easier recording. Press the button again to remove the hold function.
	Press the MAX/MIN key to enter the MAX/MIN mode. In this mode, the multimeter will capture the highest/lowest reading it records. Long-press this button more than 2 seconds to exit the Max/Min Modes.
	Backlight: Press once to turn on the display backlight. Press once more to turn off backlight. Flashlight: Long-press more than 2 seconds, to turn on/off the flashlight.

Install or replace the battery

If the"  "symbol appears on the display, the battery should be replaced immediately. Disconnect the test leads and turn off the meter. Remove the rubber sleeve and the screws on the back to replace the battery.
After that, re-apply the compartment cover and reinstall the screw firmly.

Sleep Mode

The Meter automatically enters sleep mode if there is no operation in 15 minutes to save battery energy. Pressing any button or turning the rotary switch awakes the Meter.

If you press the "FUNC." button and turn on the meter, the sleep mode will be deactivated. After restarting, the meter will restore Sleep Mode.

Measurement Operation

DC/AC voltage measurement

⚠ Don't use it to test voltage over DC1000V or AC750V, the instrument may be damaged. Always test known voltage with the meter before using to confirm the instrument function is intact.

1) Turn the rotary switch to " Hz V " and select DC/AC voltage function by "FUNC."
2) Insert the red lead in " VΩHz%LIVE " terminal, insert the black lead in "COM" terminal.
3) Connect the test leads to the source or load to be measured.
4) Read LCD display, when measuring AC voltage the frequency is displayed simultaneously.

Note: When the measuring voltage is over 80V, the orange backlight will illuminate.

DC/AC voltage mV measurement

⚠ Don't use it to test voltage over DC 250V, the instrument may be damaged. Always test known voltage with the meter before use to confirm the instrument function is intact. Always test known voltage with the meter before use to confirm the instrument function is intact.

1) Turn the rotary switch to " Hz%C mV " and select DC/ AC voltage function by "FUNC." key.
2) Insert the red lead in " VΩHz%Live " terminal, insert the black lead in "COM" terminal.
3) Connect the test leads to the source or load to be measured.
4) Read LCD display, when measuring AC voltage the frequency is displayed simultaneously.

Frequency/Duty measurement (Hz%)

1) Turn the rotary switch to "Hz%" .
2) Insert red lead in " VΩHz%Live " terminal, insert the black lead in "COM" terminal.
3) Connect the test leads to the source or circuit in parallel to be measured, measure the frequency and duty.
4) Read the measurement result on the screen.

Resistance / Continuity / Diode measurement

⚠ When measuring diode on the line, disconnect the power supply and discharge all the high-voltage capacitors. Otherwise, the instrument may be damaged.

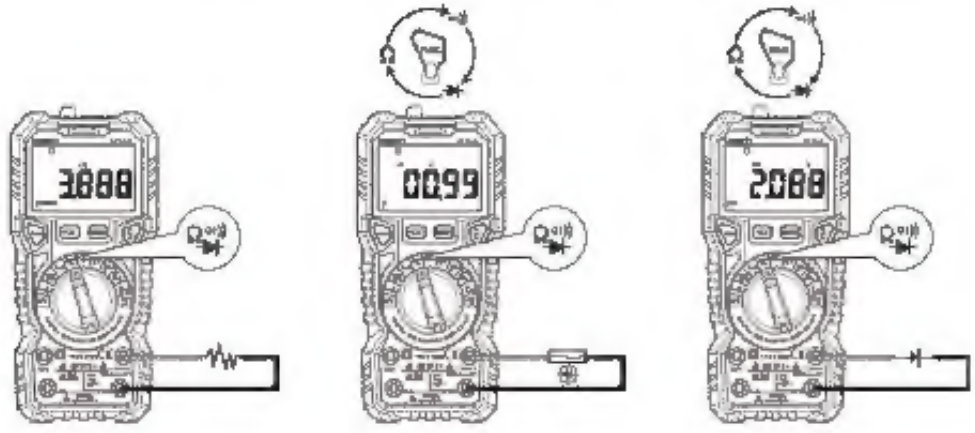
1) Turn the rotary switch to " Ω ⋙ ▶| " and select Resistance / Continuity / Diode measurement function by "FUNC."

2) Insert the red lead in " VΩ⋙▶|Hz%LPF " terminal, Insert the black probe in "COM" .

3) Connect the test leads to the source or circuit in parallel or diode to be measured. Touch the diode anode with the red lead, the black lead contacts the diode cathode.

4) Read the measurement result on the screen.

▶|	It displays the approximate forward voltage value of the diode.	Max. test current: 1.2mA Max. test voltage: 3.0V Overload protection: 250V
⋙	Resistance < 30Ω, the buzzer sounds and the indicator lights up green. 30Ω < Resistance < 60Ω, the buzzer doesn't sound and the indicator lights up red.	Max. test voltage: 1.0V Overload protection: 250V



Capacitance measurement

⚠ When measuring Capacitance on the line, disconnect the power supply and discharge all the high-voltage capacitors. Otherwise, the instrument may be damaged and may be struck by electric shocks.

1) Turn the rotary switch to " ⊣⊢ ".

2) Insert the red lead in " VΩHz%Live " terminal, insert the black lead in "COM" terminal.

3) Contact the probe to the measured circuit or Capacitance, measure the resistance.

4) Read the measurement result on the screen.

Temperature Measurement

⚠ Don't touch the charged object when measuring temperature.

1) Turn the rotary switch to the " °C/°F ".

2) Insert the K-Type thermocouple into the meter. The thermocouple's positive (red) is inserted into the "VΩHz%Live" input, and the negative end (black) is inserted into the "COM" input.

3) Carefully touch the end of the thermocouple to the object being measured. Wait for the temperature reading to settle, then record the result from the LCD display.

DC/AC current measurement

⚠ To avoid damag ng the instrument or equipment, check the fuse before measuring and ensure that the measured current does not exceed the rated maximum current, use the correct input

1) Turn the rotary switch to "$\widetilde{\mu A}^{Hz}$" or "$\widetilde{mA}^{Hz}$" or "$\widetilde{A}^{Hz}$" and select AC or DC current function by "FUNC " key

2) Insert the red lead in "mA" terminal (current < 200mA) or "10A" term nal (current < 10A) insert the black lead in "COM" termina

3) Disconnect the power of the tested circuit. connect the meter to the circuit under test then turn on the circuit power supply

4) Read the measurement result on the screen When measuring AC current, the frequency is displayed on LCD simultaneously

Note When the measuring current is over 1A, the orange backlight will illuminate

NCV test

1) Turn the rotary switch to the " NCV Live " and switch to NCV test function by "FUNC " key the meter will display "NCV"

2) Then NCV probe gradually approaches the detected point

3) When the meter senses weak AC signals, the green indicator lights up and meter beeps slowly

4) When the meter senses strong AC signals. the red indicator lights up and meter beeps fast.

Live test

⚠ n order to avoid possible accidents such as electric shock or personal njury, please follow the safety regulations.

1) Turn the rotary switch to the " NCV Live " and switch to live test function by "FUNC " key, the meter will display "L VE"

2) Insert the red lead in " Ω⊣Hz%CAP " termina , then the probe contact to the test point

3) When the meter senses weak AC signa s. the green indicator lights up and meter beeps slowly

4) When the meter senses strong AC signals, the red indicator lights up and meter beeps fast.

General Specifications

Display Measurements	20000 counts True RMS
Safety / Compliances	CAT III 1000V CAT IV 600V
Maximum Voltage	DC1000V/AC750V
Fuse protection	μA/mA: F200mA /250V Fuse
	10A: F10A /250V fuse
Measurement Speed	3 times per second
Range	Auto
Battery	2 x 1.5V AA Batteries
Temperature & Humidity	Operating: 0℃ ~40℃, <80% RH ＜10℃ non condensing
	Storage: -10 ~60° C, <70% RH, batteries removed

Accuracy Specifications

Reference condition: environment temperature 18°C to 28°C, relative humidity not above 80%

Accuracy: ± (% reading + word).

DC/AC Voltage

Voltage	Range	Resolution	Accuracy	Input impedance	Maximum input voltage
DC Voltage	200mV	0.01mV	±(0.08%+5)	10MΩ	1000V DC
	2V	0.0001V			
	20V	0.001V			
	200V	0.01V			
	1000V	0.1V			
AC Voltage	200mV	0.01mV	+(0.5%+25)	10MΩ	750V AC
	2V	0.0001V			
	20V	0.001V			
	200V	0.01V			
	750V	0.1V			
	Frequency Response 40Hz ~ 1kHz TRMS				

DC/AC Current

Current	Range	Resolution	Accuracy	Overload protection	Maximum input current
DC Current	200μA	0.01μA	± (0.5%+5)	μA/mA: F200mA/250V fuse 10A: F10A/250V fuse	μA/mA: 200mA A: 10A
	2000μA	0.1μA			
	20mA	0.001mA			
	200mA	0.01mA			
	10A	0.001A	± (0.8%+15)		
AC Current	200μA	0.01μA	± (0.8%+25)	μA/mA: F200mA/250V fuse 10A: F10A/250V fuse	μA/mA: 200mA A: 10A
	2000μA	0.1μA			
	20mA	0.001mA			
	200mA	0.01mA			
	10A	0.001A	± (1.0%+25)		
	Frequency Response: 40Hz ~ 1kHz TRMS				
Note: When measuring more than 1A current, the continuous measurement can't exceed 30 seconds.					

Resistance/Capacitance

	Range	Resolution	Accuracy	Overload protection
Resistance	200Ω	0.01Ω	±(1.0%+15)	250V
	2kΩ	0.0001kΩ		
	20kΩ	0.001kΩ		
	200kΩ	0.01kΩ		
	2MΩ	0.0001MΩ		
	20MΩ	0.001MΩ		
	100MΩ	0.01MΩ	±(3.0%+25)	
Capacitance	2nF	0.0001nF	±(4.0%+50)	
	20nF	0.001nF		
	200nF	0.01nF		
	2uF	0.0001uF		
	20μF	0.001μF		
	200μF	0.01μF		
	2mF	0.0001mF		
	20mF	0.001mF		

Frequency/Duty

	Range	Resolution	Accuracy	Voltage sensitivity	Overload protection	Minimum Measurement Frequency
Frequency	200Hz	0.01Hz	±(1.0%+30)	100mV RMS	250V	5Hz
	2kHz	0.0001kHz				
	20kHz	0.001kHz				
	200kHz	0.01kHz				
	2MHz	0.0001MHz		0.8V RMS		
	10MHz	0.001MHz	±(3.0%+30)			
Duty	1-99%	0.1%	±(3.0%+30)	/		

Voltage mV measurement frequency

1) Measuring range：10Hz~100kHz 2) Sensitivity：>10mV RMS, sine wave

Voltage V measurement frequency

1)Measuring range：10Hz~20kHz 2) Sensitivity：>0.5V RMS, sine wave

Current measurement frequency

1)Measuring range：10Hz~20 kHz

2)Voltage Sensitivity

uA：>100uA RMS, sine wave ; mA：>10mA RMS, sine wave ; A：>1A RMS, sine wave

Temperature

	Range	Resolution	Accuracy
℃	-40℃~0℃	0.1℃	±3℃
	0℃~400℃		±(1.0%+2℃)
	400℃~1000℃		±2.0%
℉	-40℉~32℉	1℉	±6℉
	32℉~752℉		±(1.0%+4℉)
	752℉~1832℉		±2.0%
Note：Accuracy does not include thermocouple probe error.			

Maintenance

Clean

If there's dust on the terminal or the terminal is wet, it may cause measurement error. Please clean the instrument according to the steps below:

1) Switch off the power supply and remove the test probe.

2) Shake out the dust accumulated in the input terminal. Wipe the outer cabinet with a damp cloth and mild detergent. Wipe contacts in each input terminal with a clean cotton swab soaked in alcohol.

⚠ WARNING

Always keep the inside of the instrument clean and dry to avoid electric shock or instrument damage.

Replace the Fuse

1) Turn off the power supply of the instrument, and remove the probe on the instrument.

2) Use screwdriver to unscrew screws fixing the back cover, and remove the back cover.

3) Remove the burnt fuse, replace with new fuse of the same specifications, and ensure that the fuse is clamped in the safety clip.

4) Install the back cover, fix and lock it with screw.